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CITY OF ABERDEEN

REPORT

BY THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1900.



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In accordance with the new requirements of the Local Government Board, I shall deal in this report with a somewhat wider range of subjects than in preceding annual reports.

POPULATION.—I have in each of the annual reports for the last four or five years drawn attention to the probability that the population of the city was considerably higher than the estimate of the Registrar-General, which was based on the rate of increase between the censuses of 1881 and 1891. Calculating the rate of increase from the growth of voters in the assessor's rolls, I ventured on the statement, in my last annual report, that "it is probable that the population is at present under-estimated to the extent of between 5,000 and 6,000." This surmise has proved to be very nearly correct, for while the population at the middle of 1900—the year under report—was estimated to be 144,966, it has now been shown by the recent census to be approximately 150,906—a difference of 5,940. The error in the Registrar-General's estimate is so large, and has affected so materially the mortality and other rates given in these annual reports, that the question is seriously raised whether it would not be more satisfactory in future, and give a nearer approximation to the truth, to estimate the growth of population in each year from the increase in the voters' roll.

I need hardly say that all the rates given in the present report are calculated upon the population as now ascertained, and that the corrections have been carried back into the rates for all the years of the inter-censal period.

The usual statistical tables relating to births, deaths, and marriages have been prepared, and are herewith submitted. They are so constructed as to enable comparisons to be made between the past year and the preceding years since 1865. The figures for the St. Nicholas and Torry division are also given separately from those of the St. Machar division (inclusive of Old Aberdeen and Woodside) so as to allow of a comparison in the rough between what may be termed the 'east-end' and the "west-end" portions of the community.

BIRTH-RATE (Table II.).—This rate (31·2 per 1,000) shows a slight fall; but it will be at the same time observed that the rate has remained almost unchanged during the last ten years, whereas during the preceding decades it had fallen considerably, commencing with 36·2 in 1866-75. It will be noted, however, that during the last ten years there has been a decided rise in the marriage-rate, namely, from 7·7 in 1890 to 9·6 in 1899, and 9·0 in 1900. This increasing marriage-rate ought, under ordinary circumstances, to have been associated with an increasing birth-rate; and the fact, that the birth-rate has not increased, points to a diminishing productiveness for each marriage. With a return of the marriage-rate to its old level, which may be looked for when the present tide of prosperity begins to recede, it is almost certain that the birth-rate will reach a lower level than hitherto. This fall in the birth-rate, whatever be its cause, is, however, becoming a prominent feature in the vital statistics of nearly every civilised community.

TABLE I.—POPULATION OF ABERDEEN IN 1900.

	Estimated Population. 1900.	PER-CENTAGE OF POPULATION AT EACH AGE-PERIOD, Calculated from Census, 1891.					
		Under 1 year.	0-5. years.	5-15 years.	15-25 years.	25-60 years.	Above 60 years.
ST. NICHOLAS AND TORRY	60,507	2.95	13.37	23.54	20.10	35.76	7.23
ST. MACHAR (Incl. Woodside and Old Aberdeen).	90,399	2.46	11.46	22.23	21.65	35.86	8.80
Whole City	150,906	2.67	12.26	22.79	21.00	35.81	8.14

TABLE II.—BIRTH, DEATH, AND MARRIAGE RATES IN ABERDEEN,
Per 1,000 of Population.

Year.	Births.			Deaths.			Marriages.		
	St. Nicholas.	St. Machar.	City.	St. Nicholas.	St. Machar.	City.	St. Nicholas.	St. Machar.	City.
1900	37.8	27.9	31.2	23.7	15.9	19.0	14.0	5.6	9.0
1899	38.0	27.7	31.9	22.6	15.5	18.4	13.9	6.7	9.6
1898	38.2	27.9	32.1	23.5	15.0	18.5	14.5	5.9	9.4
1897	37.6	28.0	31.9	21.8	14.3	17.4	13.8	6.0	9.2
1896	36.6	28.6	31.9	22.1	14.7	17.8	13.9	6.3	9.5
1895	38.2	27.7	32.1	25.5	17.2	20.7	13.4	5.5	8.8
Mean of 1895-99.	37.7	28.0	32.0	23.1	15.3	18.5	13.9	6.1	9.3
1894	35.2	28.1	31.1	22.1	15.6	18.4	12.6	5.9	8.8
1893	36.0	29.6	32.4	21.3	16.1	18.3	11.4	5.4	8.0
1892	35.8	26.7	30.7	22.7	18.7	20.5	11.7	5.8	8.4
1891	35.3	29.1	31.6	23.0	17.5	19.8	12.1	5.5	8.3
1890	32.2	28.3	30.1	24.1	18.5	21.6	10.7	5.3	7.7
Mean of 1890-94.	34.9	28.4	31.2	22.6	17.3	19.7	11.7	5.6	8.2
Mean of 1886-95	35.4	29.5	32.0	22.7	17.4	20.0	11.1	5.7	8.1
1876-85	...	...	34.3	...	...	20.4	...	...	7.8
1866-75	...	...	36.2	...	...	23.0	...	...	8.2

TABLE III.—DEATHS AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES.
Year 1900.

AGE.	ALL CAUSES.	Zymotic Diseases.			Tubercular Diseases.		Diseases of						Malignant Diseases.	Developmental Diseases (ex. old age)	Accident and Violence.	Debility, Atrophy, Inanition.	
		Miasmatic.	Diarrhoeal.	Septic.	Phthisis.	Other Tubercular.	Respiratory System.	Circulatory System.	Urinary System.	Nervous System.	Digestive System.	Under age of 1 year.				Above age of 60 years.	
WHOLE CITY.																	
Under 1 year, .	717	73	9	2	2	24	150	6	1	83	133	0	149	10	37	...	...
Under 5 years, .	1007	178	13	3	3	53	222	8	3	108	154	1	149	23	...	...	...
5—15 „ .	102	15	1	1	16	17	6	8	1	12	10	1	1	5	...	...	...
15—25 „ .	154	10	0	3	69	12	10	8	2	7	9	2	0	9	...	...	...
25—60 „ .	756	39	2	19	144	12	104	112	23	90	36	64	0	40	...	...	...
60+ „ .	847	38	9	8	19	1	161	183	36	112	52	64	0	21	...	...	105
ALL AGES, .	2866	280	25	34	251	95	503	319	65	329	261	132	150	98	...	...	...
ST. NICHOLAS (including Torry).																	
Under 1 year, .	410	43	4	2	1	12	88	5	0	51	71	0	81	7	20	...	...
Under 5 years, .	599	110	7	3	2	30	138	7	2	66	80	1	81	18	...	...	...
5—15 „ .	51	10	1	1	7	7	1	6	1	6	7	1	1	2	...	...	...
15—25 „ .	94	6	0	3	32	9	5	7	2	3	9	1	0	7	...	...	...
25—60 „ .	398	22	2	13	64	6	61	54	14	37	17	34	0	36	...	...	...
60+ „ .	291	14	4	4	6	0	59	58	15	29	16	26	0	13	...	...	37
ALL AGES, .	1433	162	14	24	111	52	264	132	34	141	129	63	82	76	...	...	...
ST. MACHAR (including Old Aberdeen and Woodside).																	
Under 1 year, .	307	30	5	0	1	12	62	1	1	32	62	0	68	3	17	...	...
Under 5 years, .	408	68	6	0	1	23	84	1	1	42	74	0	68	5	...	...	...
5—15 „ .	51	5	0	0	9	10	5	2	0	6	3	0	0	3	...	...	...
15—25 „ .	60	4	0	0	37	3	5	1	0	4	0	1	0	2	...	...	...
25—60 „ .	358	17	0	6	80	6	43	58	9	53	19	30	0	4	...	...	...
60+ „ .	556	24	5	4	13	1	102	125	21	83	36	38	0	8	...	...	68
ALL AGES, .	1433	118	11	10	140	43	239	187	31	188	132	69	68	22	...	...	...

TABLE IV.—DEATH RATE AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES
(per 100,000 of population at each age.)—Year 1900.

AGE.	ALL CAUSES.	Zymotic Diseases.			Tubercular Diseases.		Diseases of					Malignant Diseases.	Developmental Diseases (ex. old age)	Accident and Violence.	Debility, Atrophy, Inanition.	
		Miasmatic.	Diarrhoeal	Septic.	Phthisis.	Other Tubercular.	Respiratory System.	Circulatory System.	Urinary System.	Nervous System.	Digestive System.				Under age of 1 year.	Above age of 1 year.
WHOLE CITY.																
Under 1 year, .	17782	1811	223	50	50	595	3720	149	25	2059	3298	0	3695	248	918	...
Under 5 years, .	5440	932	70	16	16	286	1200	43	16	584	832	6	805	124	...	...
5—15 „ .	296	43	3	3	46	49	17	23	3	35	29	3	3	15	...	...
15—25 „ .	486	32	0	10	217	37	32	25	7	22	29	7	0	29	...	...
25—60 „ .	1398	72	4	35	266	22	192	208	42	166	67	119	0	74	...	...
60+ „ .	6894	309	73	65	155	8	1319	1491	292	912	423	520	0	171	...	854
ALL AGES, .	1899	186	17	23	166	63	333	211	43	218	173	87	99	65	...	...
ST. NICHOLAS (including Torry).																
Under 1 year, .	22924	2404	224	111	56	672	4920	280	0	2850	3970	0	4528	392	1119	...
Under 5 years, .	7440	1356	86	37	25	373	1712	86	25	819	989	13	1006	224	...	..
5—15 „ .	359	70	7	7	49	49	7	42	7	42	49	7	7	14	...	...
15—25 „ .	773	50	0	25	264	74	40	58	16	25	74	8	0	58	...	...
25—60 „ .	1839	102	9	61	297	28	283	251	65	172	79	158	0	167	...	...
60+ „ .	6651	322	92	92	137	0	1354	1331	348	665	367	596	0	299	...	849
ALL AGES, .	2368	268	23	40	183	86	436	218	56	233	213	104	136	126	...	...
ST. MACHAR (including Old Aberdeen and Woodside).																
Under 1 year, .	13683	1337	223	0	44	535	2763	44	44	1427	2788	0	3031	133	757	...
Under 5 years, .	3938	654	58	0	10	221	809	10	10	404	713	0	654	48	...	...
5—15 „ .	253	25	0	0	44	50	25	10	0	30	15	0	0	15	...	...
15—25 „ .	305	20	0	0	184	15	25	5	0	20	0	5	0	11	...	...
25—60 „ .	1100	52	0	18	246	18	132	179	28	163	58	93	0	13	...	...
60+ „ .	6966	311	62	50	163	12	1278	1566	263	1040	451	478	0	100	...	852
ALL AGES, .	1585	130	12	11	155	48	254	207	34	208	146	76	75	24	...	...

TABLE V.—MORTALITY FROM ALL CAUSES AT VARIOUS AGE-PERIODS
(per 1,000 of population at each age.)

Year.	AGE PERIOD.						All ages.
	Under 1 year.	0—5 years. (Infant Period.)	5—15 years. (School Period.)	15—25 years. (Adolescent Period.)	25—60 years. (Mature Period.)	60 years and upwards. (Post-mature Period.)	
1900 . . .	177·8	54·4	3·0	4·9	14·0	68·9	19·0
1899 . . .	170·0	54·8	3·0	5·6	12·5	64·6	18·4
1898 . . .	189·5	60·6	3·6	4·6	11·6	61·7	18·5
1897 . . .	168·6	51·0	3·2	5·3	11·4	62·6	17·4
1896 . . .	153·4	51·0	4·5	5·0	12·6	60·8	17·8
1895 . . .	201·4	62·4	4·5	5·9	12·5	67·2	20·7
Mean of 1895-99	176·6	58·0	3·8	5·3	12·1	63·4	18·5
1894 . . .	173·4	51·9	4·5	6·2	11·4	59·7	18·4
1893 . . .	151·2	42·4	4·3	5·8	13·3	69·3	18·3
1892 . . .	171·1	54·4	5·4	6·2	12·8	72·5	20·5
1891 . . .	169·0	47·2	4·7	6·5	13·1	78·0	19·8
1890 . . .	183·5	55·5	5·2	7·5	14·7	76·2	21·6
Mean of 1890-94	169·6	50·3	4·8	6·4	13·1	71·1	19·7
Mean of 1886-95	168·5	53·8	4·6	6·3	12·8	68·1	20·0
1876-85 . . .	144·9	52·0	5·7	6·9	13·5	69·9	20·4
1866-75 . . .	146·2	59·4	7·4	6·0	18·7	72·3	23·0

TABLE VI.—DEATHS FROM SELECTED CAUSES
(per 100,000 of population).—Years 1866-1900.

Year,	Miasmatic Diseases.								Diarrhoea and Dysentery.	Phtisis.	Cancer.	Bronchitis.	Pneumonia.	Diseases of Circulatory System.	Diseases of Digestive System.
	Smallpox.	Scarlet Fever.	Diphtheria.	Measles.	Whooping Cough.	Influenza.	Typhus Fever.	Typhoid Fever.							
1900,	0	7	20	37	60	54	0	7	17	166	87	170	123	211	173
1899,	0	11	19	90	34	33	0	15	23	152	98	159	111	179	156
1898,	0	26	25	15	73	23	1	10	22	156	84	173	112	190	188
1897,	0	21	10	17	15	25	0	5	27	152	89	183	106	183	154
1896,	0	44	15	29	86	13	0	4	42	174	88	167	85	162	132
1895,	0	22	9	133	70	61	0	14	52	188	88	226	96	176	151
Average 1895-99,	0	25	15	57	56	31	0.2	10	33	164	89	182	102	173	156
1894,	1	22	28	52	78	8	0	8	34	179	79	207	113	149	140
1893,	1	12	29	20	5	52	1	9	57	199	83	178	113	149	153
1892,	0	16	31	114	82	74	4	10	28	182	89	193	87	161	158
1891,	0	32	13	2	32	90	0	11	25	171	76	272	109	167	171
1890,	0	15	10	45	121	49	1	21	48	202	63	216	144	159	149
Average 1890-94,	0.4	19	22	47	64	55	1	12	38	188	78	215	112	158	155
„ 1886-95,	0.6	18	16	73	60	34	1	12	47	185	76	217	105	169	152
„ 1876-85,	0.4	24	22	32	67	1	13	21	58	215	65	268	77	152	131
„ 1866-75,	2.6	72	23	53	67	6	37	42	75	282	59	267	67	133	165

It will be observed that the birth-rate in the St. Nicholas division (37·8) is, as in preceding years, much higher than in the St. Machar division (27·9), and that, but for a slight decrease within the last two years, the rate in the former division has increased within the last ten years, while the rate in the latter division has decreased.

MARRIAGE-RATE.—The marriage-rate, though still abnormally high, has fallen somewhat in the past year, being 9·0 per 1,000, as against 9·6 in the preceding year. The difference between the two divisions of the city, in respect of the marriage-rate, is enormous, the rate in St. Machar having been only 5·6, as against 14·0 in St. Nicholas; but this is no doubt to be accounted for mainly by a considerable proportion of the marriages of persons residing in the St. Machar division taking place in the halls or churches in the St. Nicholas division.

DEATH-RATE.—This rate (19·0 per 1,000 of population) has, unfortunately, risen somewhat during the past year. In the preceding year it was 18·4, and in 1897 it touched, at 17·4, the lowest point yet reached. The rate is not, however, high for a town of the size of Aberdeen, and is, indeed, lower than in the majority of towns with a corresponding population. It is higher by 0·5 than the average in the city for the immediately preceding five years, 1895-99, but is lower by 0·7 than the average of the five years, 1890-94. In the decade, 1876-85, the average rate was 20·4, and in 1866-75 it was 23·0; so that considerable progress has been made within the last thirty years. In other words, where formerly 6 persons died, now only 5 die.

The small increase of the death-rate during the past year as compared with the preceding year has been due to no single cause, but to a nearly general rise in the mortality from the various principal diseases.

Analysis of Death-Rate.—In Tables III., IV., V., VI., and VII. material is supplied for determining in considerable measure the composition of the death-rate, or, in other words, the principal causes to which the deaths were assigned; and comparisons are instituted in respect of the two chief divisions of the city (St. Nicholas and St. Machar), and also, as regards the whole city, in respect of time, commencing with 1866. In Tables III. and IV., as also in Table V., the deaths are sub-divided according to certain age-periods.

The conclusions to be drawn from these tables can only be briefly alluded to.

As regards the comparison between the two divisions of the city—the “east-end” and “west-end”—the usual difference shows itself of a higher mortality in the former, from practically every cause and at every age. The higher death-rate from all causes and at all ages in the St. Nicholas division is almost exactly one-half greater than in the St. Machar division, and the excess is still more marked at certain of the earlier age-periods. The mortality, for example, at the “infant period” (0-5 years) is about twice as high in St. Nicholas as in St. Machar; and this difference is maintained for almost every important cause of death. The mortality at the “school age-period” (5-15 years) is in St. Nicholas nearly one-half higher than in St. Machar, and is particularly evident in the deaths from zymotic diseases, and from diseases of the circulatory and digestive systems. Contrary, perhaps, to expectation, the mortality from tubercular diseases is, at this age-period, almost alike for the two divisions. But the most striking difference is exhibited at the “adolescent age-period” (15-25 years), where the rate from all causes is fully two and a half times as high as in St. Nicholas, the excess being apparent in every cause of death, but especially in zymotic and tubercular diseases, and in diseases of the circulatory, respiratory, urinary, and digestive systems.

In regard to the *progress of the mortality from the principal diseases* in the whole city, it will be seen from Table VI. that the death-rate from diphtheria, influenza, phthisis, pneumonia, and diseases of the circulatory and digestive systems is, in each case, considerably above the average of the preceding five years, while the rate from scarlet fever, measles, typhoid, and bronchitis is appreciably under the average. The rates from whooping cough, phthisis, and cancer scarcely deviate from the average of these years. It is gratifying to note that the almost continuous advance in recent years of the death-rate from cancer did not find expression last year, and that the rate was decidedly lower than in the immediately preceding year.

Mortality at various Age-Periods, from all causes.—In Table V. is presented for the first time in these annual reports a statement of the death-rates at the various age-periods since 1866. It shows certain gratifying and certain disappointing features.

It is altogether satisfactory to find that the mortality at the school age-period (5-15 years) has steadily fallen since 1866 to considerably less than one-half of what it formerly was, and that there has been a marked decline within the last three or four years. The fall is partly, but by no means entirely, due to a diminished mortality from infectious diseases. It is not improbable that the improved school accommodation in recent years has played no inconsiderable part in the reduction. Better wages among the working classes have, no doubt, also helped, by enabling parents to feed and clothe their children better, and thus render them more resistant to illness. The saving of life at this age amounts to no less than 152 children yearly, when the present rate is compared with the rate of thirty years ago. The School Board may congratulate itself in having helped so largely in promoting the health of the children entrusted to their care.

The mortality at every other age-period, except one period, has also fallen, the fall not being, however, nearly so great as at the school period. The only age-period at which there has been a rise "is under one year." The mortality among young infants has increased materially since 1866, the increase first manifesting itself and rapidly reaching its present level in the quinquennium 1885-90. What the precise cause of this increase is, it would be difficult to say; but there can be little doubt that it is remediable. It does not appear likely that mothers are less careful of their infants than they used to be. A more probable cause is the increase of bottle-feeding. One of the commonest sources of a high infantile mortality in manufacturing towns is the employment of mothers in factories and the consequent neglect of their infants; but the proportion of mothers so employed in this city is small, though probably on the increase within the last ten years, owing to the extraordinary development of the fish-curing industry.

The proper feeding of infants is a matter in which the appointment of one or more *women sanitary inspectors* might, as in other towns, render distinct service. Such inspectors can also give invaluable help in securing domestic cleanliness, which is one of the best preventives of illness, and also in inspecting workshops and places where women are employed. Wherever women sanitary inspectors have been appointed—and they are now employed in nearly every important town—their services appear to have given complete satisfaction. I think the Town Council might well consider the appointment of one or two such inspectors. The cost for two would not be more than £100 to £120 yearly.

TABLE VII.—MORBIDITY AND MORTALITY FROM ZYMOTICS (MIASMATICS)
DURING EACH YEAR FROM 1890 TO 1900, INCLUSIVE.

DISEASE.		1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1890-99.	
													Total.	Annual Average
Small Pox,	No. of Sicknesses,	0	1	0	0	0	1	4	3	0	0	0	9	0.9
	No. of Deaths, ...	0	0	0	0	0	0	1	1	0	0	0	2	0.2
	Percent. of Deaths to Sicknesses,...	0	0	0	0	0	0	25.0	33.3	0	0	0	...	22.2
Measles, ...	No. of Sicknesses,	3061	6527	734	1884	1917	2874	2043	514	4973	59	978	22503	2503
	No. of Deaths, ...	56	134	21	23	30	172	67	26	145	2	49	669	66.9
	Percent. of Deaths to Sicknesses,...	1.8	2.1	2.9	1.2	1.6	5.9	3.2	5.1	2.9	3.4	4.9	...	3.0
Scarlet Fever, ...	No. of Sicknesses,	371	342	1078	1053	1676	596	525	411	923	980	554	8138	813.8
	No. of Deaths, ...	10	16	38	29	62	31	26	19	19	39	19	298	29.8
	Percent. of Deaths to Sicknesses,...	2.7	4.7	3.5	2.8	3.7	5.2	4.9	4.6	2.1	3.9	3.4	...	3.7
Whooping Cough, ...	No. of Sicknesses,	2471	1377	2968	366	1886	1676	2164	286	1139	662	1426	13950	1395.0
	No. of Deaths, ...	90	50	106	21	128	95	102	6	103	35	137	783	78.3
	Percent. of Deaths to Sicknesses,	3.6	3.6	3.6	5.7	6.8	5.7	4.7	2.1	9.0	5.3	9.6	...	5.6
Diphtheria.	No. of Sicknesses,	123	153	209	93	108	69	113	93	117	60	35	1050	105.0
	No. of Deaths, ...	30	29	37	14	26	12	37	28	48	19	10	260	26.0
	Percent. of Deaths to Sicknesses,...	23.4	18.9	17.7	15.1	24.0	17.4	32.7	30.1	41.0	31.7	28.6	...	24.7
Typhoid Fever, ...	No. of Sicknesses,	109	138	180	58	78	105	74	87	97	108	105	1030	103.0
	No. of Deaths, ...	10	22	14	7	5	18	11	10	14	12	23	136	13.6
	Percent. of Deaths to Sicknesses,...	9.2	15.9	7.8	12.1	6.5	17.1	14.9	11.5	14.4	11.1	21.9	...	13.2
Typhus Fever, ...	No. of Sicknesses,	0	5	5	0	0	0	1	7	44	13	1	76	7.6
	No. of Deaths, ...	0	0	2	0	0	0	0	1	6	0	1	10	1.0
	Percent. of Deaths to Sicknesses,...	0	0	40.0	0	0	0	0	14.3	13.6	0	100.0	...	13.2
Totals,	No. of Sicknesses,	6140	8543	5174	3454	5665	5321	4924	1401	7293	1882	3099	46756	4675.6
	No. of Deaths, ...	196	251	218	94	251	328	244	91	335	107	239	2158	215.8
	Percent. of Deaths to Sicknesses,...	3.2	2.1	4.2	2.7	4.4	6.2	4.1	6.5	4.6	5.7	7.7	...	4.6

INFECTIOUS DISEASES.—The chief notifiable zymotic diseases (Table VII.), taken as a whole, were considerably above the average in prevalence, 6,140 cases, with 196 deaths, having been reported or discovered, as compared with an average, for the preceding ten years, of 4,586, with 216 deaths. The mortality was, however, distinctly under the average.

Whooping cough was the most prevalent zymotic, and was closely followed by measles.

Small-pox.—No cases.

Measles.—There were 3,061 cases of this disease, with a mortality of 1·8 per cent. The cases were above the average in number, but the mortality was low. There has been an undoubted fall in recent years in the case-mortality from measles. The average for the past five years was 1·9 per cent., whereas in the preceding five years it was 3·9. Along with this fall in the mortality there has been a decided increase in prevalence of the disease, the past five years yielding 14,123 cases, as against 3,435 cases in the preceding five years. In the past two years alone there was the unprecedentedly large number of 9,588 cases.

Whooping Cough gave 2,471 cases during the year, with a mortality of 3·6 per cent. As with measles, these numbers represent an increase in cases, as compared with the yearly average, but a decline of case-mortality. During the past five years there have been 9,068 cases, with a mortality of 4·3 per cent., as against 5,927 cases in the preceding five years, with a mortality of 7·4 per cent.

This similarity between measles and whooping cough, in respect of a pronounced increase of prevalence with a pronounced decline of case-mortality, is striking. I am afraid that our efforts in limiting the spread of these diseases have been largely futile; though it is not improbable, at least for whooping cough, where parents used to be oftentimes indifferent and careless in the treatment of cases, that the visits of the inspectors, and the issue of printed instructions as to the serious character of the disease and the danger from too early exposure to cold, have helped in reducing the case-mortality.

Scarlet Fever yielded 371 cases, with a mortality of 2·7 per cent., being a considerable fall both in prevalence and case-mortality as compared with the annual average. As with measles and whooping cough, scarlet fever has also increased during the past five years, as compared with the preceding five years, the total numbers for the two periods being 4,520 and 3,435 respectively; but the increase fell entirely within the three years 1896-98, the last two years producing far fewer cases than usual. As between the two periods there has been a decrease of the case-mortality, which was 3·4 per cent. in the past five years and 3·9 in the preceding five years. The percentage of cases removed to the City Hospital was 79 in the later period, and 60 in the earlier period.

The increased prevalence of the three commonest of the notifiable zymotics is certainly not due to diminished vigilance on the part of the Sanitary Department, for the policy of the Department has been one of increasing strictness in securing proper isolation of the patient, and in seeing that disinfection is properly carried out after the removal or termination of the case. The great difficulty in effectively controlling the spread of these diseases—and it seems to be well-nigh insuperable—lies in the occurrence of cases so mild that the patient or his friends either pay no heed to the case or altogether fail to observe it, with the result that the cases are never notified and are not subjected to control, and may, from first to last, be moving about outside. In this connection it is interesting to note that the increased prevalence is associated with a diminished case-mortality, indicative of increased mildness of type.

Diphtheria produced 128 cases, with a case-mortality of 23·4 per cent. This is above the average for the past ten years in respect of prevalence, and is about equal to the average in regard to case-mortality. As compared with the preceding two years, there has been a considerable fall in the number of the cases, with, however, a considerable increase of case-mortality. As I took occasion to mention in one of the monthly reports, this increase of case-mortality is disappointing in view of the proved efficacy of the antitoxin treatment, which, if used sufficiently early, ought to give a greatly reduced mortality. Of the 128 cases, 82 were removed to the City Hospital, and were all, unless the case was very

mild, treated with antitoxin on admission; and, although many of the cases were severe, and several required tracheotomy, the mortality was only 7·3 per cent. Among the cases treated at home the mortality was 52 per cent. The chief hindrances to the more liberal use of antitoxin are its high price and the need for administering it by subcutaneous injection. But its advantages far outweigh the expense and trouble.

During the past five years, diphtheria, like the preceding zymotics, has been more prevalent than in the previous five years, the total numbers for the two periods being 691 and 452 respectively, with case-mortalities of 31·8 and 19·8 per cent. Once again, an increased prevalence with a diminished case-mortality.

Typhoid Fever yielded 109 cases—a number slightly above the annual average during the past ten years, but considerably under the number for the preceding two years. The case-mortality was only 9·2 per cent., which is distinctly under the average. Although the number of cases was considerable, and the possible sources of each case were carefully investigated, no widely operating common cause was found. Except for a small outbreak in one of the hospitals, the cases were scattered, and, for the most part, unrelated.

There is an interesting coincidence in prevalence between typhoid and diphtheria. Both, after being low for some time, suddenly sprang up to a maximum in 1898, from which they have since slowly declined, without yet having reached their ordinary level.

Again, with typhoid, as with the other zymotics thus far dealt with, an increased prevalence has taken place within the past five years, as compared with the preceding five years, the total numbers for the two periods being 563 and 471 respectively; while also, as before, the case-mortality has diminished, the percentage mortalities being 10·3 and 13·8.

Typhus Fever.—No cases. One case was notified as typhus, but after being under observation in the Hospital, to which it was removed, it was found to be a case of typhoid.

Leaving aside small-pox, typhus fever is the only notifiable zymotic exhibiting a marked decline during the past five years, only 10 cases having occurred in these years, as against 65 in the preceding five years; and, as if to emphasise the dissimilarity, the case-mortality has risen from 11 per cent. to 20.

Influenza is not notifiable, but the registered deaths from it show a considerable increase during the year—the number being 81 as against 49 in the preceding year. We have to go back to the four years (1890-93) immediately following the commencement of the present spell of influenza to find so large a number of deaths from this disease. As usual, the deaths were chiefly among persons well advanced in years.

Plague.—No case occurred in the city, or in any vessel arriving at the port. After the outbreak in Glasgow commenced, I drew up a memorandum of the symptoms of the chief varieties of plague, and distributed copies among the medical practitioners in the city. A copy of it was, at the time, transmitted to the Local Government Board. Special precautions were taken with regard to ships from plague-infected countries, and a systematic inspection by the sanitary staff was made of all the lower parts of the town, and especially of the parts in the vicinity of the docks, with a view to clearing away all nuisances, and giving directions as to the destruction of rats, although I fear these directions were not largely given effect to. The Cleansing Department gave valuable help in seeing to the general cleansing and to the flushing of lanes and courts.

The unfortunate and considerable outbreak of plague at Cape Town, with which town there is at present so much intercourse from every part of the Home Country, makes it necessary that there should be no relaxation of precautions.

Tuberculous Disease is, properly speaking, to be classed with the infectious diseases. Table VIII. gives detailed information as to the mortality from this, the most fatal of all diseases, and at the various age-periods. With a view to stimulating efforts in the control and prevention of this disease, it is desirable, at the risk of yearly reiteration, to impress the public mind with the sad fact that 1 in every 8 deaths from all causes in Aberdeen last year was due to some form of tuberculous disease, chiefly phthisis. At the "adolescent age-period" (15-25 years) more than one-half of all the deaths were due to tubercle, and, at the "school age-period" (5-15 years), nearly one-third.

TABLE VIII.—DEATHS AT VARIOUS AGE-PERIODS FROM TUBERCULOUS DISEASES
IN YEAR 1900, WITH AVERAGE FOR PRECEDING FIVE YEARS,

Compared with Deaths from Miasmatic Diseases and from All Causes.

	Year.	Number of Deaths.					Proportion of Deaths from Tubercular Diseases to Deaths from All Causes.
		Phthisis.	Other Tuber- cular Diseases.	ALL TUBER- CULAR DISEASES.	ALL MIAS- MATIC DISEASES.	ALL CAUSES.	
ALL AGES,	1900 Av. 1895-9	251 237	95 113	346 350	280 269	2866 2664	1 : 8 1 : 8
Infant Period,	1900 Av. 1895-9	3 5	53 69	56 74	178 184	1007 1031	1 : 18 1 : 14
0—5 Years,							
School Period,	1900 Av. 1895-9	16 17	17 21	33 38	15 24	102 122	1 : 3 1 : 3
5—15 Years,							
Adolescent Period,	1900 Av. 1895-9	69 65	12 10	81 75	10 10	154 152	1 : 2 1 : 2
15—25 Years,							
Mature Period,	1900 Av. 1895-9	144 138	12 11	156 149	39 23	756 641	1 : 5 1 : 4
25—60 Years,							
Post-Mature Period,	1900 Av. 1895-9	19 11	1 1	20 12	38 27	847 745	1 : 42 1 : 63
60 + Years,							

During the past thirty years there has been a notable and almost continuous reduction in the mortality from phthisis (see Table VI.), and it is, accordingly, disappointing to find a rise last year, but it is probably only temporary; and, in any case, it is compensated for by the distinct decline in the mortality from tubercular disease other than phthisis. It is of much interest to observe that last year the mortality from tubercular diseases had fallen considerably at the "infant" and "school" age-periods, notably the former, and had risen at all the later age-periods, especially the "post-mature" period.

In my annual report for 1898 I directed special attention to the desirability of providing a sanatorium for the isolation and treatment of curable phthisical cases. The private sanatoria for this purpose, of which there are now several in Scotland, including one on Deeside, are far too expensive to be available even for the ordinary middle classes. A hospital for the apparently incurable cases is also much needed, but it is scarcely to be hoped that both can be undertaken at the same time, and the former may have precedence, as the more useful.

BACTERIOLOGICAL EXAMINATIONS.—The arrangement with Professor Hamilton, of the Pathological and Bacteriological Department of the University, by which he undertook, in March, 1898, for an annual payment of £150 by the Town Council of Aberdeen and various co-operating Local Authorities, to make, with the help of a special assistant, all bacteriological examinations required by the Public Health Department and by the medical practitioners of the city, continues to work with the utmost smoothness, and with satisfactory results. Exclusive of examinations of diseased meat, a record of which was not kept, altogether 436 bacteriological examinations were made for the city during the year (Table X.), and, it is generally admitted, were most helpful in aiding the diagnosis of cases of typhoid, diphtheria, and tuberculosis.

TABLE IX.—BACTERIOLOGICAL EXAMINATIONS,

made by Professor Hamilton, University of Aberdeen, under agreement with the Town Council.

YEAR.	SUSPECTED DISEASES.											
	TYPHOID FEVER.				DIPHTHERIA.				TUBERCULOSIS.			
	Posi- ti e.	Nega- tive.	Doubt- ful.	Total.	Posi- tive.	Nega- tive.	Doubt- ful.	Total.	Posi- tive.	Nega- tive.	Doubt- ful.	Total.
1900	108	48	6	162	74	95	4	173	37	64	0	101
1899	152	37	6	195	92	127	13	232	32	52	0	84

Several examinations were also made in connection with the inspection of food.

Every medical practitioner is kept supplied with the necessary apparatus for taking samples of material and transmitting them to Professor Hamilton, who sends the result direct to the practitioner, with a daily summary of all examinations to me. In order to encourage a free use of the arrangement, no obligation is laid upon the medical practitioner to give the name or address of the patient from whom the material is taken.

It is obvious from a perusal of the returns that several of the medical men of the city are not availing themselves as largely as they might of the arrangement. But it is interesting to observe that such practitioners as have begun to resort to its aid seem to make an increasing use of it, thus showing their growing confidence in it.

VACCINATION AND RE-VACCINATION.—Owing to a considerable epidemic of small-pox in Glasgow, commencing in the last months of the year under report, considerable attention has recently been given to the value of vaccination and re-vaccination in the prevention of this loathsome and deadly disease. Fearing disastrous effects on the success of the great Exhibition which was being prepared for the current year, the Glasgow authorities have made a supreme effort to check the epidemic by offering facilities for re-vaccination on a scale of unprecedented magnitude in any large town in this country. They thus succeeded, within a few months, in procuring the re-vaccination of about one-half of their large population, with the striking result that in no single instance was a re-vaccinated person attacked by small-pox, provided, of course, that the re-vaccination had been performed and taken effect before the person was exposed to the small-pox contagion. The many hundreds of cases of small-pox were entirely confined to the half of the population which had not been vaccinated or re-vaccinated within recent years. As the exposure to infection was probably as great among the one half of the population as among the other half, and may, indeed, be said to have been greater among the re-vaccinated, owing to the large number of persons engaged in

dealing with the epidemic—in removing and nursing cases and disinfecting houses—belonging entirely to this group, the Glasgow experience offers one of the most striking and easily comprehended proofs of the efficacy of vaccination, though it establishes nothing new, and only confirms previous experience.

In view of a proposal which I desire to submit in regard to re-vaccination in Aberdeen, it may be well, besides this allusion to recent Glasgow experience, to state as briefly as possible the main proofs of the utility of vaccination in preventing or modifying an attack of small-pox.

1. (a) It is established beyond doubt, as a matter of universal experience, that once a person has suffered from an attack of an ordinary infectious disease he is not likely to be attacked again; and that this is true of small-pox.

(b) It has also been proved beyond dispute, by numerous experiments on animals, conducted by scientists of the greatest eminence, such as Pasteur, that in the case of certain infectious diseases which are operative against the lower animals, it is possible by particular methods of cultivating or treating the disease germ to reduce very considerably its virulence, so that when introduced into an animal it will produce a very mild and limited effect. Yet the effect is such as to prevent the animal being attacked by the germ in its originally virulent form, if subsequently introduced. The immunity gained in this way, and with practically no risk to the animal's life, is probably not so strong as that obtained from an ordinary attack of the disease, but it is usually sufficient to secure complete immunity for some years afterwards. In the case of anthrax, one of the most dangerous of cattle diseases, this method of producing immunity by inoculation has been used extensively for the protection of herds, with the best results.

(c) It is maintained that vaccination and small-pox stand in precisely the same relation to one another as the inoculation, above described, and anthrax; that, in other words, vaccination produces a modified small-pox, but so much modified that it causes only a slight general disturbance of the body, is practically unattended by danger, and is not infectious except by inoculation. In these respects it agrees with the anthrax inoculation.

But it is contended by anti-vaccinationists that the analogy between anthrax and small-pox fails in the essential particular that vaccine matter is not derived from small-pox. Jenner's original vaccine lymph was taken from persons who had been inoculated in milking or handling cows suffering from so-called cow-pox. Jenner believed this pox to have been derived originally from human small-pox; and this belief has, since Jenner's time, been confirmed by experiments with small-pox virus, which show that though the cow or calf is usually insusceptible to the action of small-pox virus, as taken direct from man, yet it has, in several instances, been successfully inoculated. From these inoculations in series has been obtained a lymph which did not differ from Jenner's lymph in any manner whatever, either in the mode of its action upon the body or in its protective effect against small-pox. Indeed, a large part of the vaccine lymph at various times in use was originally so derived. Some recent and interesting experiments on monkeys show that if the small-pox virus is first inoculated into a succession of monkeys and then transferred to cows or calves, it acts on these without fail, giving rise to typical vaccine pox, from which lymph for human vaccination purposes can be taken. There is, therefore, now no reason to doubt the relationship of vaccination to small-pox. To complete the proof of the relationship it may be stated (1) that, if a person is first vaccinated, it is impossible to produce any effect by the subsequent inoculation of the virus of small-pox; and (2) that, if a person has had small-pox, unless the time of attack be very remote, it is impossible to produce any effect by attempted vaccination. The former experiment cannot be repeated in modern times, as inoculation of small-pox is now illegal; but I have made the latter experiment on several occasions, and always with the same negative result.

These are, briefly, the chief scientific considerations which give reasonable grounds for believing that vaccination should prove efficacious in the prevention or mitigation of small-pox.

There still remains the evidence of the effect of vaccination on small-pox as derived from actual experience.

2. More than a century has passed since vaccination was first recommended by Jenner, and as hundreds of millions of persons have been vaccinated during these years, it cannot be said that the available experience is insufficient to warrant valid conclusions.

Such experience has shown:—

(a) That small-pox has enormously diminished since the introduction of vaccination. Whereas small-pox was formerly one of the commonest of zymotics, it is now one of the rarest.

(b) That when small-pox breaks out in a vaccinated community, it attacks grown-up persons mainly; whereas in an unvaccinated community, whether in this country in pre-vaccination days, or in unvaccinated countries at the present time, it affects, in common with all ordinary zymotics, children principally. This change of incidence can be accounted for only by the protection which the young enjoy from their proximity to infantile vaccination.

(c) That it is rare to find persons attacked within ten to twelve years of their vaccination or re-vaccination; and that the liability to attack is more or less diminished for the remainder of life.

The experience of the recent Glasgow epidemic offers the latest and most striking proof of the complete immunity conferred by recent vaccination. Such experience receives ample confirmation in the protection which the nurses and attendants in small-pox cases enjoy when not too remotely vaccinated. A Committee of the Epidemiological Society inquired into the circumstances of 1,500 attendants on small-pox cases, and found that 43 had contracted small-pox, but not one of these had been re-vaccinated. No re-vaccinated nurse or attendant had taken small-pox.

Then there is the ever-recurring experience in every considerable outbreak of the disease that the unvaccinated suffer in much larger proportion to their numbers than the vaccinated, though their vaccination be remote.

(d) That the severity of the attack and the risk of death are much greater among unvaccinated persons.

From an analysis of nearly 20,000 small-pox cases treated in the London small-pox hospitals during a series of years, it has been found that the mortality among the unvaccinated is *six* times as great as among the vaccinated (taking all vaccinated persons, whether well or ill vaccinated), and *twenty* to *thirty* times as great as among the well vaccinated. Moreover, as was to be expected from such differences in the mortality, the average severity of the attack was far milder in the vaccinated than in the unvaccinated.

(e) That, though the protective effect of vaccination diminishes in course of time, it is uncommon to find that persons, who have been vaccinated in infancy and re-vaccinated after the lapse of some years, take small-pox, even if the re-vaccination be remote. If such persons take small-pox, however long after re-vaccination, they almost invariably have it in so mild a form that their lives are not imperilled, and their faces are not disfigured. In other words, small-pox, when taken in such circumstances, is robbed of its accustomed terrors, and is positively much less dangerous than measles or scarlet fever.

In further illustration of some of the above points, the following summary of the attack and mortality rates in the large Sheffield epidemic in 1887-88 are worth noting:—

(A) *Among children under 10 years of age.*

(1) 101 in every 1,000 *un-vaccinated* children took small-pox; and of those attacked 440 in 1,000—or *nearly one-half*—died.

(2) 5 in every 1,000 *vaccinated* children took small-pox; and of those attacked only 1 in 1,000 died.

(B) *Among persons above 10 years of age.*

(1) 94 in every 1,000 *un-vaccinated* persons took small-pox; and of those attacked 510 in 1,000—or *more than one-half*—died.

- (2) 19 in every 1,000 *once-vaccinated* persons took small-pox; and of those attacked 10 in 1,000 died.
- (3) 3 in every 1,000 *twice-vaccinated* persons (including remotely re-vaccinated persons) took small-pox; and of those attacked less than 1 in 1,000 died.

It appears, therefore, from the Sheffield experience, that, among persons above ten years of age, an unvaccinated person is about 30 times more likely than a twice-vaccinated or re-vaccinated person to take small-pox, and, when attacked, is over 500 times more likely to die; and, further, that a twice-vaccinated person, as compared with a once-vaccinated person, is 6 times better protected against attack, and 10 times better protected against death.

These are the chief grounds for the belief in the protective and mitigating effect of vaccination against small-pox, a belief which may be said to be strongly and all but universally held by the 300,000, or more, of medical men in civilised countries. Can all these be wrong, and only the one or two hundred medical men right who regard the efficacy of vaccination as a delusion? There are educated men in the present day who believe the earth to be flat. But such a consideration does not bring a shadow of doubt to the mind of any really intelligent man as to the earth's rotundity. It is a favourite rejoinder from anti-vaccinationists that medical men profit by their belief in vaccination, by drawing fees for vaccination. It may scarcely be an answer to those who believe vaccination to be useless to say that doctors would profit far more largely by the untrammelled prevalence of small-pox; but this certainly may be said, that there are many thousands of medical men, who, on account of their special field of work, as professors, consultants, surgeons, oculists, officers of health, never benefit by a single vaccination fee, and yet among those will be found some of the most ardent supporters of vaccination.

This survey of the evidence for vaccination is with a view to clear the way for the following proposal. I have found in the large number of re-vaccinations carried out in the city recently that none came forward more readily than school children—with, I have no doubt, the approval of their parents. There was decidedly greater reluctance on the part of grown-up persons to present themselves, attributable, I feel certain, less to any doubt of the inutility of the operation as to a fear of the possible interference for a day or two with their occupation. I confess to some sympathy with the working father of a family who is afraid to risk the possible loss of a day's work and a day's wages, or with the mother who has no one to undertake her household duties in the event of temporary disablement. It is different with school children, who are not engaged in hard manual work, and who can, if need be, give up their labours for a day without serious loss.

I would, therefore, suggest that the Town Council, as the Local Authority under the Public Health Act, and by virtue of the powers contained in Section 77, endeavour to arrange with the School Board, and other school authorities in the city, for the vaccination every year, at some time to be chosen by the Board, of all children in attendance at school who have reached the age of, say, ten years. On the first occasion the vaccination would be offered to all school children of ten years and upwards, not already re-vaccinated. In subsequent years, it would be confined to the comparatively limited number of children who had reached the age of ten during the intervening year—say, one-sixth to one-seventh of all the children then in attendance in school. If the offer were generally accepted, it would lead in course of time to virtually the whole population of the city, above the age of ten, having the protection of re-vaccination. If this were so, the fear of an outbreak of small-pox would be exceedingly small; and if by some chance an outbreak occurred, the cases would be very few and very mild, and the city would be saved the enormous expense, such as Glasgow has recently had to bear, in fighting with a serious epidemic. There would, of course, be the expense of the annual vaccinations, but this need not be large, and would assuredly be greatly less than the annual outlay in interest and sinking fund which will soon be necessary under our present system for the provision of a separate small-pox hospital, to say nothing of the annual upkeep. Several details would require adjustment, but they present no difficulty. The consent of the parents would, of course, be previously obtained in every case by the issuing of a suitable printed form.

HOUSE ACCOMMODATION OF THE LABOURING CLASSES.—Aberdeen is fortunate, as compared with most towns of the same size, in not having a large extent of over-crowded areas or of slum property; and a considerable part of what there is of such areas and properties has been dealt with, or is in course of being dealt with.

The scheme for dealing with the so-called Exchequer Row area—a very populous and overcrowded part in the centre of the city—which was declared unhealthy a few years ago, under the Housing of the Working Classes Act, and for which a Provisional Order was obtained in 1896, was advanced through an important stage in the last year by the demolition of the remainder of the houses in the centre of the area, so that the area now consists of a large open space bounded on three sides by a single line of houses which front the adjoining streets. The sanitary condition of the area has been immensely improved by the gutting of the interior, though it is desirable that the scheme should be completed by the proper utilisation or laying out of the open space, and by the provision of proper sanitary conveniences for the remaining houses, if the houses are not to be rebuilt.

Another sanitary improvement of about equal magnitude is being indirectly effected through the removal of a large area of slum property in order to provide a site for the extension of the Marischal College buildings of the University.

There is still need, however, for dealing with other overcrowded areas, for example (1) around Shuttle Lane, (2) between Justice Street and East North Street, (3) around the Guest-row, and (4) between the Gallowgate and Seamount Place. Many of the properties in certain of these areas have been in the possession of the Town Council for several years with a view to an improvement scheme.

A full report of the condition of these and other areas, by the Sanitary Inspector and myself, was submitted to the Town Council in 1892. Many of the houses therein reported as insanitary have since been closed by the Town Council, under the Corporation Act of 1881. Nineteen separate dwellings in Rennie's Wynd were so closed during the year, upon a further report by the Sanitary Inspector and myself.

It is hoped that the power under the new Local Act of 1900, with regard to the demolition of dwelling-houses already closed under the Act of 1881, will be of much service in dealing with some houses, which, though closed some years ago, have not been rebuilt, and are falling into such a state of decay and neglect as to be a menace to the sanitary condition of adjacent properties.

During the year a report was submitted by the Sanitary Inspector and myself on the insanitary condition of a small area of the town at the entrance to the River Dee, known as the Fishers' Squares, and inhabited by a population of about 708, consisting mainly of fishermen and their dependents. The area has an abundance of air-space, and the houses are in fair condition, but there is a very serious lack of water-closets and sinks and other sanitary conveniences. The chief difficulty in supplying such conveniences lies in the comparative poverty of the occupiers of the houses, who are, in the large majority of cases, also the owners, having acquired the houses on very favourable terms from the Town Council some years ago. Active steps are, however, at present being taken for the purpose of having this grave state of matters remedied.

With a view to assist in providing accommodation for the population displaced by improvement schemes, the Town Council acquired, in 1897, in the east end of the city, a piece of open ground, 2½ acres in extent, on which they have erected, and are in course of erecting, a number of tenemented houses suitable for the labouring and artisan classes. The houses are three storeys in height, and contain each six to twelve tenements of one to three rooms, entering from a common lobby and staircase. The rental of the tenements ranges from £5 5s. to £10. Except for a liberal allowance of open space behind, and the proposed provision of playground within the space, the houses thus provided do not essentially differ in type from the working-class houses erected by private owners.

There is at present before the Council a proposal, which deserves the greatest sympathy, for the erection of artisan cottages in the outskirts of the city. With greatly improved train

and tram services, there is no reason why one or more colonies of such cottages should not be commenced in the vicinity of the city. They would go a long way towards solving the important problem of the proper and healthy housing of the working classes. Slums could never arise in cottage colonies; though they might in several of the streets of tenemented houses erected even within recent years. The chief difficulty in providing cottages for the working classes is the cost of the land, but this ought to be overcome by legislation if it cannot be done by judicious foresight on the part of the Corporation in acquiring, when opportunity offers, suitable ground at some approximation to agricultural value. The housing question has become largely a question of the ability to acquire land at a price approaching to its natural or intrinsic value.

WORKSHOPS.—It is, perhaps, to be regretted that, in respect of sanitary requirements, the plans of all new workshops are not submitted to the Public Health Committee and their officers, as in the case of plans of bake-houses, provision works, and offensive works, since the responsibility for subsequently seeing that the workshops, when erected, are kept in a good sanitary condition rests with those officers. Some plans of workshops have, however, come under the notice of the Sanitary Inspector and myself. We are strongly of opinion that no new workshop should be allowed which is in any measure underground, or is not well-lighted and well-ventilated. Abundance of light and fresh air are essential to good health; and no man has a right to make a profit out of the labours of others without seeing that the place in which they work is conducive to the maintenance of good health. It pays to have good workshops; for good workshops will attract good men, keep them in good health, and secure the best out-put in respect of quality and quantity. There is often niggardliness in the amount of window space, not because of any structural difficulty in obtaining more, or because of greater cost, but merely from custom or convention. There are few trades in which it is possible to have too much light. Good light is a great help to accuracy in work, and to cleanliness by showing up the dirt, and is always cheerful and inspiring. Moreover, it is Nature's most powerful disinfecting and purifying agent.

The plans of a considerable number of new fish-curing and provision works and of extensions of existing works were reported upon by the Medical Officer and Sanitary Inspector, and recommendations were made, where required, for securing the proper lighting and ventilation and drainage of the premises, and for the mitigation of nuisance from smoke. It has now for some years been made a condition in all such premises that the floor shall be constructed of impervious material and grooved and sloped to one or more gullies so as to prevent undue wetting of the feet of the workers, and to admit of proper flushing. Stress is laid in securing a sufficiency of light as well as of ventilation, as conducing to a sweeter and more wholesome atmosphere, and to greater cleanliness. The grooving of the floor has not been frankly assented to in every case, but we are of opinion that when properly done it greatly helps, along with proper sloping of the floor, to prevent workers—generally women—having to stand in pools of water all day long. There is no more common cause of chills and colds than wet feet.

The plans of a new combwork, of considerable size, and an extension of an aerated water manufactory, were also reported upon.

BAKE-HOUSES.—The bake-houses have all been inspected in the course of the year, and are, on the whole, in a satisfactory condition. As the result of a thorough overhauling of them a few years ago, they have reached a much higher standard in construction and cleanliness than formerly. The construction and general arrangements of the bake-houses have altered considerably in recent years, owing to the almost universal introduction of machinery, and to a tendency, which everywhere accompanies the substitution of machinery for manual labour, to the growth of large businesses, and the gradual disappearance of the smaller ones. Such a growth has been an advantage in many ways to the sanitary condition of the bake-houses, the most modern of which are airy and well-lighted, and in every respect well adapted to their work, while the bread is prepared with far less hand contact than

formerly. No new bake-house can now be built below the level of the ground, and comparatively few of the old underground bake-houses remain. The principal defect in several of the bake-houses is a lack of sufficient attention to cleanliness and orderliness. The nature of the materials and the character of the operations tend, no doubt, to dirty floors and general untidiness, but the standard of cleanliness and orderliness might with advantage be raised. In order to give facilities for personal cleanliness we have been insisting for some years on the provision of hand-basins as well as sinks.

Judged by our experience it does not appear to be sufficiently known that it is illegal for baking, with a view to sale, being carried on in a dwelling-house. Cases now and again occur where a person—it may be a former journeyman baker—begins the making of scones or pies in the kitchen of his house, the baked articles being sold in a small shop or, as in one case, hawked through the streets. Such baking is very properly forbidden by statute, owing to the possibility of the bread being contaminated or infected.

OFFENSIVE TRADES.—On the recommendation of the Medical Officer of Health and Sanitary Inspector, sanction was given during the year by the Local Authority to the establishment of the following business, under Section 32 of the Public Health Act, viz., a gut-cleaning and sausage skin manufactory, at the rear of No. 475, George Street.

Due precautions were taken, as usual, that the business would be, as far as possible, conducted without offence or nuisance.

Some difficulty was experienced in dealing with certain offensive businesses within the meaning of the Act, which, such as bone-boiling in a provision factory, had been started at some time prior to the new Public Health Act coming into force, that is prior to 1898. If such a business had been discovered before 1898, and while the old Act of 1867 was in operation, there would have been no difficulty in compelling the occupier of the premises to apply for the sanction of the Local Authority and in suing for a penalty if thought proper. But, apparently by an oversight in the drafting of the new Act, the phrasing of the old Act is allowed to stand, so that the Section reads thus:—"If any person, after the commencement of this Act, establishes, without the sanction of the Local Authority, the following business—
"nesses . . . he shall be liable to a fine . . ." These were the very words employed in the Act of 1867, under which such sanction was for the first time required; but, as used in the Act of 1897, they seem to make it impossible to deal with the establishment of any offensive business which took place before the Act of 1897 came into operation.

The various businesses in the town were conducted, on the whole, without complaint as to nuisance from effluvia, except the distillery of the North of Scotland Distillery Company, which, as stated in the Sanitary Inspector's report, has been the subject of numerous complaints since the autumn of 1899, when a process was introduced for the drying of the grain residue or dreg by means of revolving steam-heated cylinders. The dreg is tossed about within these cylinders until dry, when it is raised by cups on an endless belt and run into sacks, and sold for the feeding of cattle. The dreg has undergone prolonged fermentation before being dried, and therefore contains some disagreeable volatile substances in solution, which are evolved in the heating. Moreover, the steam-heating is of sufficiently high temperature to lead to the formation of certain empyreumatic products, which, it is well known, have, like singed food, a very penetrating and far-reaching odour. The odour was distinctly felt within a radius of 400 to 500 yards from the distillery, and was sufficiently strong and disagreeable to interfere materially with the comfort and even with the health of many of the neighbouring residents and to prevent, so long as it prevailed, the opening of windows for ventilation. Very strong complaints were received, and as a result of these the distillery was repeatedly visited by the Sanitary Inspector and myself. As no abatement followed from the warnings given and the notices issued, a certificate was drawn up by me in terms of the Public Health Act, and authority was obtained from the Town Council to institute a prosecution against the owners of the distillery. This step led, though the prosecution was not actually undertaken, to a considerable diminution of the nuisance,

partly from a more complete protection of the machinery with wooden casing, and the ventilation of the fumes into a tall chimney stalk, and partly from the process being carried on to a less extent than at first. During the past year scarcely any complaints were received until towards its close, when further warnings led once again to an abatement of the nuisance. But at the time of preparing this report, several fresh complaints have been received, and steps are being taken with a view to a prosecution.

Slaughter-houses.—One of the chief problems facing the Local Authority at the present time is the provision of proper accommodation for slaughtering. There are 10 slaughter-houses—3 of considerable size, and accommodating several butchers, and 7 of smaller size, and used privately. Most of them, including all the larger ones, have been many years in existence, and are, accordingly, not of modern construction and not equal to modern requirements. With possibly one or two exceptions, the smaller houses are no better. The slaughter-houses are scattered throughout the city, and are mostly situated in populous districts. In no single instance is the situation such as to enable the cattle or the carcasses to be transported without passing along public thoroughfares—in most cases, crowded thoroughfares. The amount of slaughtering done in Aberdeen is large, and greatly beyond the city's own requirements, there being an extensive exportation of dead meat to London; and the quality of the animals slaughtered is probably not surpassed in any town in the kingdom, though, of course, there are exceptions, as everywhere else. The inspection of the meat in the various slaughter-houses, as well as in the butchers' shops, is undertaken by one inspector, who has also to inspect the huge and growing quantity of fish at the Fish Market and elsewhere. He does his work as well as it can possibly be done under the circumstances, but he is obviously given an impossible task, if the work is to be performed thoroughly. The system of inspection is necessarily detective in character, and not systematic. There is no assurance that every carcass has been seen by the inspector before being removed for sale and consumption.

It is obvious from these facts that the arrangements for slaughtering and for inspection in Aberdeen are, to put it plainly, disgracefully out of date and unsatisfactory, and that the one remedy is centralised slaughtering with complete and systematic inspection, as is now the practice in almost every town of importance, and even in many towns with not a fourth part of the slaughtering done in Aberdeen. The Town Council have given the subject much attention in recent years, and a special committee has the matter in hand, with a view to providing a Corporation slaughter-house. But progress has been impeded by the opposition of vested interests and by a difficulty—not, however, insuperable—in securing a suitable site. It is to be hoped for the credit of the city, and in the interests of the public health, that definite steps will be taken, before the close of the present year, towards providing a public slaughter-house. It ought, as in nearly all other places, to be self-supporting; and, if not, the margin of loss would prove a trifling burden, and would be more than compensated for by the increased guarantee of the soundness of the meat consumed.

Flock-mills.—Such mills, of which there are a few in this city, are not ranked among offensive trades, and, perhaps, they are not offensive in the ordinary sense of being a nuisance to neighbouring residents. But there can scarcely be any doubt that their manufactured products are not without serious menace to the public health. These mills receive large quantities of used and filthy rags and clothing, which, without any previous cleansing or disinfection, are teased by suitable machinery into so-called flock, which again, without any cleansing, is sold and used for the stuffing of mattresses, couches, chairs, and other articles in which flock is of service. The process elsewhere does not, I am told, differ materially from what it is in Aberdeen. If so, it is far from satisfactory that what would be described and sold as a new flock bed or flock-stuffed article of furniture is really stuffed with teased filthy rags, collected throughout the town and country from all kinds of places and people. It cannot fail that in many instances the rags are part of the clothing of persons suffering from various kinds of infectious and even loathsome diseases. It is obviously

desirable that some general power should be obtained to compel the cleansing and disinfection of all rags used for such purposes. A clause in a Local Act is quite insufficient. For if the making of flock were hampered in one town, it would probably lead to the extinction of flock-making in the town; but as the demand for flock would continue, the flock would be imported from towns where no restrictions existed.

I believe the better qualities of woollen rags, still, however filthy, are exported to towns in the south, where, after being teased, they are woven again into shoddy tweeds, such as are used for the cheap clothing, so common now-a-days; but whether the material is cleansed or not, I cannot say.

PIG-STYES.—During the preceding year (1883) advantage was taken of the powers conferred in the new Public Health Act of 1897 to prepare bye-laws for regulating the situation, construction, and cleanliness of pig-styes. The standard aimed at in the regulations is high, and has properly led to the discontinuance of several unsuitable piggeries, and to a decided improvement of those remaining. The Department has endeavoured to dispel the notion that the one domestic animal which delights in filth is a pig, and that therefore the more filthy the sty, the more pleased the pig. The pig in its natural state is not a filthy animal, and there is not the smallest ground for believing that its likings have changed with domestication. Moreover, it is repugnant to the senses, if not positively dangerous to health, that an animal, which is bred and kept solely for food purposes, should be allowed up to the day of its being slaughtered to wallow in the foulest filth, and to gather part of its food, as often happens, from the surface of a midden.

There is one not uncommon practice in the feeding of pigs which, unfortunately, does not come within the scope of the bye-laws. I refer to the feeding of pigs with raw, uncooked slaughter-house offal. Pigs are very susceptible to various diseases, notably tuberculosis, and they are easily rendered tubercular by feeding on the uncooked entrails of a tuberculous ox. All animal food given to pigs should be previously cooked, so as to kill any disease germs. Although a bye-law cannot be made to this effect under the Public Health Act, the prohibition might be enforced by its insertion in the annual licence for pig-styes under the local Act of 1867, as a condition of granting the licence.

PUBLIC PARKS.—It is gratifying to record that, towards the close of the year, the Town Council acquired, as an additional park, the grounds of Westburn, extending to fully 22 acres. The Park will be of much advantage in providing greatly needed facilities for outdoor recreation in the north-western part of the city.

It is greatly to be desired that it were practicable for the Council to set on foot some scheme for the provision of small parks or, rather, recreation-grounds, in the as yet unbuilt-on lands in the vicinity of the more populous parts of the city, before the lands have become entirely covered with houses. A policy of small recreation-grounds, large enough for ordinary outdoor games, but without the pretensions of a public park, would prove of the greatest service in promoting the health of the young, and, subsequently, the health of the adult, and of the general community.

Ordinary play-grounds for children are also much wanted throughout the city.

EXAMINATION OF SHIPS.—It is the practice of the Department, at all times, to visit and examine medically the crew and passengers of any vessel arriving in the port, with reported cases of illness on board. This is carried out under an arrangement with the Captain Pilot and Collector of Customs, who undertake to inform the Medical Officer of Health of the arrival of such a vessel within the waters of the port. But, during the past year, this arrangement was extended to all vessels, whether with sickness on board or not, arriving from ports or countries known to be infected with plague. Fortunately, only a very few such vessels came to this port, and in none of them was sickness of any kind found.

One sailor, who was removed to the Fever Hospital from a steam trawler, gave a little anxiety for a time. His chief symptom when first removed was feverishness, but it was

accompanied by tenderness and slight diffuse swelling of one arm-pit, without, however, any palpable swelling of the glands. The axillary condition was suggestive of plague, but the other symptoms of the disease were wanting. After a day a moderate scarlatinoid rash showed itself, with fairly characteristic tongue and throat. No plague bacilli could be found in fluid aspirated from the arm-pit, though tested on more than one occasion; and the case was diagnosed as scarlet fever—a diagnosis which was confirmed by subsequent, though not profuse, desquamation. The arm-pit gave trouble for several weeks, and, still without swelling of the glands, ended in suppuration at a point behind the arm-pit. Perhaps the condition of the arm-pit was due to a chill, as the man had, a few days before, fallen into the sea at Lerwick on the return passage from a fishing cruise in northern waters.

LEGISLATIVE POWERS.—The past year has been fruitful in fresh local powers relating to public health. Under a new Act—the Aberdeen Police and Improvement Act, 1900—powers have been obtained for the following sanitary purposes:—

(1) *Selling of Ice-cream.*—To place ice-cream vendors and their premises on precisely the same footing, and subject to the same regulations, as dairymen.

(2) *Demolition of Uninhabitable Houses.*—To enable the Town Council to proceed to demolish an uninhabitable house under the Housing of the Working Classes Act, though such house has not been previously closed by the Sheriff under the Public Health Act, but has been closed by an order of the Town Council under the Aberdeen Corporation Act of 1881.

(3) *Cemeteries.*—(a) To prevent cemeteries or burial grounds being laid out or extended in the burgh without the previous sanction of the Town Council; and to prevent, except with the consent of the Council, the interment of human remains in any place other than a cemetery. The general law of Scotland does not regulate the location or construction of cemeteries, and it does not prevent burials within the grounds of a private house or institution, even in a burgh, provided no nuisance can be proved. Such a burial took place recently in Aberdeen.

(b) To enable the Town Council to make bye-laws for the regulation and preservation of cemeteries. Under the general law of Scotland there exists no such power, except in the case of cemeteries constructed or owned by a parish or town council. Also to compel the owners of every cemetery to keep a proper register of all burials, specifying the place of burial with reference to a plan. Strange as it may appear, no general powers exist for this important purpose, and a cemetery could be legally conducted without any register whatever.

(4) *Streets and Buildings.*—To extend the minimum width of new streets to 50 feet. To prevent cul-de-sacs in the formation of new streets. To regulate the height of all buildings, in place of dwelling-houses only, as in previous Acts. To authorise the inspection, by an officer of the Town Council, of all buildings in course of construction or alteration, and prevent the occupation of any new dwelling-house for more than two tenants before such house has been inspected and passed. To enable the Town Council to make bye-laws as to the mode of construction and the materials of new buildings, and as to the site, and also as to the drainage and plumber work and sanitary arrangements.

(5) *Parks.*—To enable the Town Council to set apart portions of their public parks and other open spaces for the purpose of games and other forms of recreation, and to provide apparatus for such purposes, and also pavilions, &c.

(6) *Underground Lavatories.*—To enable the Town Council to construct such lavatories under any street within the city.

It is worthy of remark that, in considering the Bill, the Police and Sanitary Committee of the House of Commons disallowed all clauses containing powers, approaching, in character and extent, those contained in the Burgh Police (Scotland) Act, and gave as their reason that the Corporation had not availed itself of its power to adopt the corresponding sections of the latter Act, though it was pointed out that considerable difficulty is experienced in properly assimilating such adopted sections with local procedure. The Committee, in so acting, departed from the precedent set in recent Local Acts of other large Scottish towns.

CONGRESS OF THE ROYAL INSTITUTE OF PUBLIC HEALTH.—In reporting on the incidents in the public health for the year, it is perhaps proper to embrace a brief reference to the Congress of the Royal Institute of Public Health held within the city in August, by invitation of the Corporation. It was in some respects the outstanding event of the year in the sanitary history of the city, and was generally admitted to be one of the most largely attended and successful of the various Congresses of the Institute. The Congress was fortunate in having, for its President and Honorary President, the Earl of Aberdeen and Lord Provost Fleming, and in securing several of the most eminent sanitarians and scientists in the country as presidents of sections and conferences and as lecturers and readers of papers. Many valuable addresses and papers were read which cannot fail to affect favourably the progress of the public health not only within the city and adjacent districts, but throughout the kingdom generally. The volume of addresses and papers issued by the Executive Committee of the Congress will form a permanent memorial of the amount and value of the work accomplished.

CIGARETTE-SMOKING BY BOYS.—I feel it to be my duty to direct attention to the harmful and even vicious habit of cigarette-smoking among young boys. The habit, which had its commencement only a few years ago, has, it is obvious to every one, greatly increased. Groups of small boys, of quite tender years, may be seen almost any day with cigarettes. While smoking can, without material harm, as a rule, be indulged in by persons of mature years, it is quite different with growing boys. Careful inquiries have been made into the subject, especially in France, and indisputable evidence has been obtained of the deleterious effects of tobacco on the young—impairing their health, stunting their growth, and hindering the development of their intellect. Tobacco is largely a nerve poison, and all nerve poisons are particularly dangerous to the young, and may lead to permanent effects. It also engenders in some boys the altogether uncleanly and insanitary habit of spitting. There is also a serious moral danger. The habit of cigarette-smoking is an expensive one for young boys, and often quite beyond their slender pocket allowance. Once the habit is formed, there is, therefore, the strong temptation to minister to it by improper means. Boys are tempted to do more or less dishonest things in order to obtain the necessary money. It is notorious that juvenile thieving has been greatly on the increase in Aberdeen recently. It would be interesting to know to what extent it may have been dependent on smoking. No youth should smoke before the age of 20 or 21, and certainly not before the age of 17 or 18; and not only should parents forbid it, but, as much of it goes on unknown to them, every school teacher should do what he can to suppress it, by pointing out the dangers, and by the exercise of disciplinary measures. I am glad to observe that the subject has already been receiving attention in the schools, though it might receive more.

TABLE X.—BIRTH, MARRIAGE, AND DEATH RATES DURING THE YEAR 1900.

PRINCIPAL TOWNS IN SCOTLAND.

	Glasgow.	Edin- burgh.	Dundee.	Aber- deen.	Leith	Paisley.	Greenock	Perth.
Estimated population (<i>in thousands</i>).	753	311	160	151	76	78	68	33
Birth Rate (<i>per 1000 of population</i>).	32·4	26·1	29·5	31·2	32·9	31·5	32·4	24·0
Marriage Rate..... (<i>per 1000 of population</i>).	10·0	9·7	8·0	9·0	7·1	8·6	7·7	9·1
Death Rate (<i>per 1000 of population</i>).								
(a) From all causes, and at every age	21·8	18·9	21·2	19·0	16·2	20·6	19·1	21·4
(b) From all causes, and under 5 years of age.....	68·8	51·7	65·6	55·8	43·6	56·6	54·2	41·0
(c) From zymotics(miasmatic) at every age	2·6	1·6	1·3	1·8	0·8	2·4	2·1	2·1
(d) From all causes, exclusive of zymotics (miasmatic) at every age..	19·2	17·3	19·9	17·2	15·4	18·2	17·0	19·3

In comparing Aberdeen with the other large towns of Scotland (Table X.), and taking account of the alterations in the estimated populations, brought about by the recent census, it will be observed that the birth-rate and marriage-rate of Aberdeen were among the highest, while the death-rate was among the lowest.

CITY HOSPITAL.

ANNUAL SUMMARY, 1900.

ZYMOTIC ADMISSIONS AND DEATHS DURING EACH YEAR FROM 1890 TO 1900 INCLUSIVE.

DISEASE.		1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1890-99.	
													Total	Annual Average
Small Pox,	Admitted, ...	0	2	0	0	0	1	4	3	0	0	0	10	1'0
	Died, ...	0	0	0	0	0	0	1	1	0	0	0	2	0'2
	Percent. of Deaths to Admissions, ...	0	0	0	0	0	0	25'0	33'3	0	0	0	...	20'0
Measles, ...	Admitted, ...	342	191	194	129	266	40	125	104	283	5	115	1452	145'2
	Died, ...	9	4	7	0	4	0	1	3	3	0	3	25	2'5
	Percent. of Deaths to Admissions, ...	2'6	2'1	3'6	0	1'5	0	0'8	2'9	1'1	0	2'6	...	1'7
Scarlet Fever, ...	Admitted, ...	280	343	920	842	1181	456	334	254	432	574	384	5720	572'0
	Died, ...	7	16	28	16	29	17	15	6	10	16	5	158	15'8
	Percent. of Deaths to Admissions, ...	2'5	4'7	3'0	1'9	2'5	3'7	4'5	2'4	2'3	2'8	1'3	...	2'8
Diphtheria,	Admitted, ...	82	78	79	26	35	20	24	21	21	22	9	335	33'5
	Died, ...	6	8	4	2	2	2	3	2	6	6	1	36	3'6
	Percent. of Deaths to Admissions, ...	7'3	10'3	5'0	7'7	5'7	10'0	12'5	9'5	28'6	27'3	11'1	...	10'7
†Typhoid Fever, ...	Admitted, ...	26	35	18	0	0	8	4	2	3	0	0	70	7'0
	Died, ...	2	6	2	0	0	1	1	0	0	0	0	10	1'0
	Percent. of Deaths to Admissions, ...	7'7	17'1	11'0	0	0	12'5	25'0	0	0	0	0	...	14'3
Typhus Fever, ...	Admitted, ...	0	5	5	0	0	0	1	7	41	13	1	73	7'3
	Died, ...	0	0	2	0	0	0	0	1	5	0	0	8	0'8
	Percent. of Deaths to Admissions, ...	0	0	40'0	0	0	0	0	14'3	12'2	0	0	...	11'0
Other Zymotics,	Admitted, ...	14	10	12	4	1	2	3	13	1	5	26	77	7'7
	Died, ...	2	1	1	0	0	0	1	0	1	1	2	7	0'7
	Percent. of Deaths to Admissions, ...	14'3	10'0	8'3	0	0	0	33'3	0	100'0	20'0	7'7	...	9'1
Total Zymotics,	Admitted, ...	744	664	1228	1001	1483	527	495	404	781	619	535	7737	773'7
	Died, ...	26	35	44	18	35	20	22	13	25	23	11	246	24'6
	Percent. of Deaths to Admissions, ...	3'5	5'3	3'6	1'8	2'4	3'8	4'4	3'2	3'2	3'7	2'1	...	3'2
Quarantine,	Admitted, ...	18	22	34	16	23	15	31	75	83	13	28	340	34'0
	Died, ...	0	0	0	1	1	2	0	0	0	1	0	5	0'5
	Percent. of Deaths to Admissions, ...	0	0	0	6'2	4'3	13'3	0	0	0	7'7	0	...	1'5

† Cases of Typhoid Fever are not, as a rule, admitted, being sent to the Royal Infirmary and Sick Children's Hospital.

CITY HOSPITAL.

The City Hospital for the isolation and treatment of infectious cases consists of a Nurses' Home or Administrative Block, with six detached pavilions for patients, one of which, constructed of wood, was built solely for small-pox cases, and another of which was originally intended for a reception-house, and was so used for many years, but has latterly, owing to an increase of diphtheria and typhoid patients, been continuously occupied by such cases. It has always been arranged, however, in times of special need of accommodation for quarantine or contact cases, for example, as during the threatened importation of cholera and plague, and, quite recently, during the outbreak of small-pox, to have one of the pavilions thoroughly cleaned and disinfected, and in readiness for such cases. But it is desirable that fresh and independent accommodation should be obtained for reception-house purposes, and the subject has been on more than one occasion under the consideration of the City Hospital Committee.

The question also of a separate small-pox hospital has been discussed, but owing to the difficulties surrounding such a proposal, especially in the acquirement of a suitable site, no definite steps have yet been taken.

The accommodation for nurses, owing to recent extensions, is now ample and excellent.

The wards are fitted to accommodate 146 adult patients, exclusive of about 70 to 80 cots for children. Although, when the beds and cots are fully occupied, the cubic space is under the usual amount for a fever hospital, the atmosphere is maintained in a perfectly satisfactory state by the use of mechanical ventilation in winter, and cross ventilation in summer. The mechanical ventilation is effected by two propulsive fans, driven by a gas engine, the air being previously heated, when required, by passing over coils of hot-water pipes. The main objection to the mechanical system is that though the air is passed through moistened filter screens, it is very difficult to keep it free from dust; and the walls of the wards, especially in the line of the air-inlets, quickly becomes streaked with dust. The natural cross-ventilation in summer, when no heating is required, gives as pure an air in the wards as the mechanical system in winter.

The disinfecting station for the city and for the Hospital stands in the grounds of the Hospital, and consists of two steam laundries, with separate accommodation, the one for the laundry work of the Hospital, and the other for the laundry work required in connection with the clothing and bedding removed from infected houses. There are also two steam disinfectors, on the Washington Lyon principle, one of which was introduced during the past year, in order to enable the sanitary staff to undertake more satisfactorily disinfecting work in times of large epidemics. In ordinary times, only one disinfecter is kept in use. The number of disinfections is occasionally very large, owing to measles and whooping cough being notifiable in addition to the diseases stated in the Notification Act.

During the year (see Table) 762 patients were admitted into the Hospital, the great bulk of the patients suffering from measles or scarlet fever. For the first time in the experience of the Hospital, the measles cases were in excess of the scarlet fever cases. About 70 per cent. of all the scarlet fever cases occurring within the city were removed to Hospital; 11 per cent. of the measles cases; 73 per cent. of the diphtheria cases; and 80 per cent. of the typhoid cases. The percentages in the diphtheria and typhoid cases include the cases treated in the Royal Infirmary and Sick Children's Hospital.

The mortality rate for each disease is, with the exception of measles, gratifyingly low. In the case of measles, the rate (2.6 per cent.) is above the average, but this was in large measure due to an outbreak of measles in an institution where a number of the children attacked were already suffering from other serious ailments. All the cases in the institution were transferred to the City Hospital.

As will be observed from the Table, the number of diphtheria and typhoid cases treated in the Hospital has greatly increased during the past three years. While this is in part due

to an increased prevalence of the diseases during these years, it is mainly owing to fewer cases of typhoid being now treated in the Royal Infirmary and Sick Children's Hospital, and fewer cases of diphtheria being removed for operation to the Sick Children's Hospital. Formerly these hospitals were understood to find accommodation for all the typhoid cases, but, latterly, they have shown less disposition to receive them, with the result that an increasing number has been admitted to the City Hospital. No such understanding ever existed in respect of the diphtheria cases, but for many years the parents of cases requiring operation expressed a preference for the Sick Children's Hospital, and the managers were good enough to set apart a ward for such cases, and to offer no objections to their admission. Latterly, parents more seldom express such a preference, and the cases are accordingly more largely removed to the City Hospital.

MATTHEW HAY, M.D.,
Medical Officer of Health.

ABERDEEN, 12th July, 1901.

